

# BILAL SIDDIQUE

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## Junior Devops Engineer

DevOps / Cloud Engineer with 1+ year of hands-on experience architecting AWS infrastructure, automating CI/CD pipelines, and building full-stack applications. Proven track record of introducing DevOps culture in startup environments using Terraform, GitHub Actions, Docker, and AWS ECS/EC2. Deep experience with observability (Prometheus, Grafana, Loki, Tempo, OpenTelemetry) and containerization. Adept at reducing operational overhead, improving deployment frequency, and enabling real-time monitoring across microservices architectures.

## WORK EXPERIENCE

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### Code Reroute • Remote — Canada • 04/2024 - Present

#### Junior DevOps / Cloud & Full-Stack Engineer • Full-time

- Pioneered DevOps culture in a startup by adopting Infrastructure as Code with Terraform and automating end-to-end CI/CD pipelines via GitHub Actions, cutting manual release effort by 80% and enabling zero-downtime deployments.
- Architected and deployed a production-grade AWS ECS infrastructure using Terraform, provisioning VPC, ALB, IAM roles & policies, OIDC providers, ACM certificates, and ECR repositories for fully automated, secure deployments.
- Optimized Docker images from 930 MB to 220 MB, significantly improving build times and reducing ECR storage costs.
- Migrated deployment strategy from ECS to EC2 with Docker Compose for pre-launch cost optimization; managed the complete EC2 instance lifecycle including Nginx and SSL certificate auto-renewal.
- Implemented a full-stack observability platform using Prometheus, Grafana, Loki, and Tempo; instrumented all microservices with OpenTelemetry (OTLP) to enable distributed tracing, centralized log aggregation, and log-to-trace correlation for rapid bug resolution.
- Developed an internal admin dashboard (Next.js + NestJS) integrating AWS SDK (CloudWatch Logs, Cost Explorer), Cloudflare geo-blocking controls, and Resend for bulk email — enabling real-time cluster monitoring, cost visualization, and user management.
- Built an Admin Panel for a multi-tenant restaurant SaaS application, enabling management of users, restaurants, reservations, and staff assignments; built with Next.js, shadcn/ui, and TanStack Query.

### Usman Institute of Technology • Karachi, Pakistan • 01/2023 - 07/2023

#### Assistant Python Lecturer

- Collaborated with the lead lecturer to create and deliver Python programming lectures; led extra-support tutorial sessions and helped organize coding events to foster a coding culture among students.

### RadicalX • Remote • 09/2022 - 11/2022

#### Software Engineer (Internship)

- Collaborated in a cross-functional team of frontend/backend developers, designers, and PMs to build a company apprenticeship portal with full CRUD functionality.
- Tech stack: React.js, Redux Toolkit, Firebase, JavaScript, Tailwind CSS; implemented responsive layouts and contributed to engineering ticket breakdowns from user stories.

## EDUCATION

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### B.Sc. Software Engineering

NED University of Engineering & Technology • Karachi, Pakistan • 10/2019 - 10/2023

- Relevant Coursework: Cloud Computing (A) • Data Encryption & Security (A) • Data Mining (A) • Data Structures & Algorithms • OOP
- Final Year Project: Coreference Resolution in Urdu Language

## PROJECTS

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### **ECS Monitor Pro** • 11/2024 - 02/2025

- Internal admin dashboard for an AWS ECS cluster: real-time container metrics, task counts, cluster health, AWS Cost Explorer visualizations (daily averages, service-wise breakdowns), Cloudflare geo-blocking controls, user/employee management with resume viewing, an ECS log viewer, and mass email targeting for beta users and applicants.
- Stack: Next.js, NestJS, AWS SDK, CloudWatch, Cloudflare API, Resend.

### **Observability Stack (Microservices Architecture)**

- Designed and deployed a full observability stack (Prometheus, Grafana, Loki, Tempo) on an EC2 instance; integrated OpenTelemetry across all backend microservices to collect metrics, logs, and distributed traces with OTLP.
- Established log-to-trace correlation in Grafana/Tempo, enabling engineers to jump from a log entry directly to the corresponding distributed trace, dramatically reducing mean time to resolution (MTTR).

### **Play — YouTube Clone Backend**

Production-grade YouTube clone backend (Node.js, Express, MongoDB, JWT) supporting video uploads, subscriptions, likes, comments, and Cloudinary media storage.

## SKILLS

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**Cloud & Infra:** AWS (ECS, EC2, VPC, ALB, IAM, ACM, ECR, CloudWatch, Cost Explorer), Cloudflare, Docker, Docker Compose, Nginx, Terraform

**CI/CD:** Automated ECS & EC2 deployments, ECR-based pipelines, GitHub Actions

**Observability:** Distributed Tracing, Grafana, Log-Trace Correlation, Loki, OpenTelemetry (OTLP), Prometheus, Tempo

**Backend:** Express.js, MongoDB, NestJS, Node.js, PostgreSQL, RabbitMQ, Redis, REST APIs

**Frontend:** Next.js, React.js, shadcn/ui, Tailwind CSS, TanStack Query, TypeScript

**Dev Practices:** Agile/Scrum, Git, Linux/Unix, Microservices, Shell Scripting